
PRACTITIONER'S DIGEST

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ASSESSING RISK THROUGH ENVIRONMENTAL, SOCIAL AND GOVERNANCE EXPOSURES

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Jeff Dunn, Shaun Fitzgibbons and Lukasz Pomorski

We discuss risk and return implications of incorporating ESG considerations in an investment strategy. We focus on the risk side in particular and argue that ESG exposures may be informative about the risks of individual firms. We find clear support for this hypothesis in the data. Stocks with worst ESG exposures have total and stock-specific volatility that is up to 10-15% higher, and betas up to 3% higher, than stocks with the best ESG exposures. This finding is strong overall, robust to a wide variety of controls, and clear globally as well as in individual regions (US, World ex US, or in emerging markets). We also find that ESG scores may help forecast future changes to risk estimates from a traditional risk model. Controlling for the contemporaneous risk model estimates, we show that poor ESG exposures predict increased future statistical risks. While the effect is modest in magnitude, it is consistent with ESG exposures conveying some information about risk that is not captured by traditional statistical risk models. Overall, our findings suggest that ESG may have a role in investment portfolios that extends beyond ethical considerations, particularly for investors interested in tilting toward safer stocks.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE CRITERIA: WHY INVESTORS SHOULD CARE

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Ravi Jagannathan, Ashwin Ravikumar and Marco Sammon

While the principal fiduciary responsibility of professional money managers is to maximize returns, they must take their clients' Environmental, Social, and Governance (ESG) concerns into account while making investment decisions. While it may appear that ESG considerations come at the expense of higher returns, we argue otherwise.

Firms are long-lived and changes in regulations, disruptive technology and socially acceptable business practices will affect future cashflows. Given the difficulties inherent in forecasting long-horizon

cashflows, value investors who rely on fundamental analysis and take concentrated positions tend to invest in well-managed firms in good businesses. We argue that such managers should also incorporate ESG criteria in their investment strategy to select firms that are well prepared to deal with these changes and manage downside risk. As ESG-related risks can have large systematic components, long-horizon investors who allocate assets across well-diversified portfolios will also benefit from incorporating ESG criteria in their decision-making process.

Given their increased severity and frequency, future environmental crises are more likely to cause sudden changes in regulations, technology and consumer tastes. These rapid changes can cause large swings in asset prices, leaving investors with limited ability to react. Turning a qualitative procedure, such as evaluating risk of environmental regulation, into a quantitative procedure, however, will take time: Warren Buffett was investing for over 50 years before researchers came up with a way to replicate his strategy using quantitative methods.

ESTABLISHING ESG AS RISK PREMIA

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Julia L. Pollard, Matthew W. Sherwood and Ryan Grad Klobus

This research examines the effect of the systematic integration of favorable trends in environmental, social, and governance (ESG) ratings on the risk-adjusted returns of global equity portfolios. In doing so, this research provides statistically significant evidence for the empirical identification of ESG as a factor of risk premium when integrated within an equity portfolio. ESG risk premia is further suggested to be independent of those identified by Fama and French, such as market, size, value, profitability, and liquidity. These findings strengthen the argument for the practical implementation of ESG integration within investment strategies, not only as a qualitative implementation of policy or social responsibility, but also as a quantifiable metric used to generating alpha.

This study provides more than simply a framework for ESG integration; it demonstrates clear evidence for ESG as a risk premium factor. The evidence further serves as a foundation for analyzing, and implementing ESG factors and sub-factors in investment strategy. As a result, this research provides a practical foundation for further research on the most effective methods of integrate ESG factors within traditional investment strategies, in order to better predict the return distribution of equities and thus yield higher risk-adjusted returns globally and longitudinally.

A BLUEPRINT FOR INTEGRATING ESG INTO EQUITY PORTFOLIOS

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Jennifer Bender, Todd Bridges, Chen He, Anna Lester and Xiaole Sun

ESG investing has become front and center for many investors as more and more research shows it has implications for both risk and return. Given how quickly how it has evolved and how fast terminology and data has changed, we provide an overview in this paper of the available data and discuss the main ways ESG can be incorporated in equity portfolios, both passive and active.

A main challenge is that ESG data collection and aggregation methods can vary significantly across providers, leading to very different ratings for the same company. This issue originates with the fact

that companies have historically not been formally required to report their internal initiatives on ESG. Across the leading providers, we find ESG scores are positively correlated but still distinctly different. Investment managers need to understand what drives these differences and which dataset(s) are valuable and relevant to their own investment process.

One promising avenue is to build an ESG framework that rests on materiality. Not all ESG metrics are material to all sectors. Some issues, such as governance related to board composition, have broad applicability across sectors while other issues have more limited scope, such as drug affordability for pharmaceuticals. We illustrate the creation of a proprietary ESG framework that uses materiality to determine which ESG metrics are most important by sector. This approach to ESG has the potential to significantly impact performance.

If the data issues are properly addressed, integrating ESG has important potential benefits for investors. A key dimension is the horizon of the investment process. For example, if the manager is deep value with a long horizon, ESG may be more appropriate than for a momentum-oriented manager with a shorter horizon. ESG should also be balanced against the investment strategy's primary goals. Our "blueprint" lays out a path for any investment manager seeking to understand how ESG fits into their investment process.

CARBON FOOTPRINT AND PRODUCTIVITY: DOES THE "E" IN ESG CAPTURE EFFICIENCY AS WELL AS ENVIRONMENT?

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Gerald T. Garvey, Mohanaraman Iyer and Joanna Nash

It is widely argued that stocks with a large carbon footprint should be avoided because they are vulnerable to future greenhouse gas regulations or taxes. We show that there is a more concrete and durable reason to consider emissions when selecting stocks. Most of a firm's activities, or inputs, result in some form of carbon emission due to direct energy consumption or indirect emissions (e.g., travel). We first show evidence that carbon emission operates as an input to production along with the classic capital and labor. More importantly, firms that produce more than expected given their inputs tend to out-perform in the future both in profitability and returns.

Most existing work focusses on the *level* of emissions, which is an appropriate metric for gauging exposure to major changes in regulation or investor preferences. However, this essentially represents a once-off effect in a small number of large carbon emitting stocks. Our approach implies that carbon footprint is a far more robust and durable investment insight. First, we find strong effects in industries such as internet and commercial services where absolute emissions are small and carbon taxes would have little direct effect. Second, our performance tests focus on the change rather than level of emission efficiency and while our return effects are modest they are more likely to be sustainable in the long term.